THE TECH

DAILY

VOL. XXIX. NO. 49. BOSTON, MASS., WEDNESDAY, NOVEMBER 24, 1909 PRICE ONE CENT

"CELLULOSE" SUBJECT OF CHEMISTRY ADDRESS

H. S. Marks Entertains Chemical Society With Interesting Talk

At the meeting of the chemical society in the small dining room and study room of the Union this evening, Mr. H. S. Mark '99 gave a very interesting talk on cellulose and cellulose products. Mr. Mark is with the A. D. Little Co. of Boston, chemists.

The meeting was called to order by the chairman at 8.10. After the reading of the minutes of the preceding meeting, the only business was to inform the members that it was desirable to amend the constitution so that sophomores would be allowed to vote. The chairman then introduced Mr. Mark.

Mr. Mark began his talk with a few statements regarding the quality of cellulose in the world. In part he said that if you stopped a man on the street and asked him what a metal was he could probably tell you, but on the other hand, if you asked him what cellulose was he could only stare blankly and would not answer, whereas he had a great many times more cellulose about him than metal. In fact, a great part of his clothes were cellulose and his bank roll, if he had one. For numbers he stated that there was annually 10,000,000 tons of cellulose produced.

Very little about celluloise is known, however. It is the cell structure of all plant life. It is coloidal in form, and is a number of molecules bound together. Its specific gravity varies between 1.5 and 1.55. It will absorb water and will also form chemical combinations with it.

Water form cellulose hydrates. These hydrates have little reducing power. It is used commercially in carbonizing wools, with the aid of acids. It is also used in making artificial silks and parchments, as other cellulose products are.

Oxidising agents produce oxy-cellulose. This is a weaker compound than the hydrates, but has a greater reducing action.

Organic acids do not unite with cellulose. Other acids have a much stronger action. These acids, however, act in many different ways. No alkalies except caustic soda have any effect on this interesting substance. A strong solution of hot caustic soda has a mercerizing action on it.

Different solutions of cellulose have attained great commercial value. One of them is the making of electric lamp filaments, which is done by squirting streams of cellulose into zinc-chloride.

Some of these solutions and their nature and uses are as follows: Cuproamonium solutions are used externally in making artificial silks.

Viscos is a solution made by treating cellulose wth a strong caustic soda solution and putting it through other chemical processes. Some of its uses are in making silks and coating papers.

Cellulose acts as an alcohol, but very little is known of it as such.

The most important products of cellulose are its nitrates and acetates.

The nitrates are all very inflammable, but the acetates do not burn so readily. The differences in the nitrates are the amounts of nitrogen in them.

Celluloid has very little nitrogen in it. Higher nitrates are used in making metal lacquers, artificial silks and

(Continued on page 4.)

BIG JOINT CONCERT OF TECH AND WESLEYAN

Musical Clubs To Give Fine Program--Management Plans For Large Crowd

On Friday, Nov. 26, Paul Revere Hall, Mechanics Building, will be the scene of the best joint musical club concert ever given, in which Tech has had a prominent position. Technology and Wesleyan University plan on making this affair the greatest of the season in its line. Both clubs are first-class this year, and since the number of selections by each will be limited, a very select program will be obtained.

After the concert, a reception will be held, and then dancing will reign till midnight. Paul Revere Hall is the finest hall for dancing in this vicinity.

The undertaking is quite extensive, and no expense has been spared by the managment to have everything up to the highest standard.

Tickets are going rapidly among the alumni and students of both colleges. It is the desire of the manager, W. W. Warner 1911, that all those who have ordered seats obtain them at once, for he is not sure that they will last beyond Thursday. Seats will be exchanged at the Union between twelve and two daily.

INDOOR TRACK WORK

Practice To Start Dec. 13 Relay Trials Jan. 22

On Monday, Dec. 13th, Coach Kanaly will call out candidates for the indoor track team. Although the date is early at the present time it looks as though we should have a fairly good team this year. There are forty-five freshmen taking track work this year in place of gym, and from this the team ought to get some good material. The sophomores have some fine track men in J. Grant, S. E. Reed and three other sprinters of 1912. For long distances and middle distances this class has H. Benson, H. G. Watkins, A. Cartwright and R. M. Ferry. For weight men they have D. Benbow and J. L. Gray. In the other classes there are some very good men. P. D. White, W. C. Salisbury of 1911, H. S. Cummings, and K. Fernstrom of 1910.

The dates that are set for the indoor events are not as yet positively announced, but probably the indoor meet will be on Friday evening, January 14. The preliminary trials for the 390 yard relay team will come on Saturday, January 22, with the finals on the following Saturday.

The men picked for the relay team will report for duty on February 7; the team will run in the B. A. A. meet on February 12.

There will be quite a competition for places on the team this year. W. C. Salisbury 1911 of last year's team is silll in the field, R. H. Gould 1911, P. D. White 1911, S. E. Reed 1912, and M. A. Cettinger 1912 are promising candidates

Coach Kanaly expects every candidate for the 'varsity team in the spring to come out and work with the indoor team this year.

A Russian undergraduate at the University of Missouri speaks six languages, all of which he learned in three months. He came from Wolien a month ago.

The Intercollegiate (Cross Country)
Flag Staff
"THE WEEK— —GONE BY~
John Harvard tried to harness a new mule last Saturday that he bought of a man in New Haven but was suddenly ejected from the shed - Bmguille Courier
John
The New Haven Mule
YALE
A Suggestion For The Aero Club
SHINGLE
Seen and Heard Around the Gym.
"I've got My Spot"
The Fellows Attend Gym Very Regularly Now There's A Reason
Columbia
Princeton

HANDICAP CROSS-COUNTRY RACES SATURDAY

Three New Cups Awarded--Lorenz, Ex-Record Holder, Is To Run

On next Saturday will be held the annual handicap cross-country race. This race is held every year shortly after the I. C. A. A. A. A. race. The main purpose is to stimulate cross-country work at the institute and to bring out new material. The handicaps are time handicaps, every man running over the full distance, which in this case is eight miles. The four men making the best time are awarded the insigna cTc. Most every year some new men win these letters, last year two freshmen, H. Benson and E. Ferry, received them.

Beginning this year a new interest should be shown on account of the three beautiful cups presented by E. H. Lorenz 1905, R. Ellis 1909, F. H. Hunter 1902, and A. R. Hunter 1908, to be given, one to the man making best time and one each to the two men finishing first and second.

Mr. Hunter has taken great interest in Tech cross-country work. He has shown some men over the course for the last two Sundays. These men took the precaution to lay a heavy trail, so all the runners can easily follcw the course.

The race starts near Highland Station in West Roxbury, and goes over hills, down dales, through woods, and also gives some road work. The course is admirably suited for the race, and much plesure can be derived by the contestants.

As many of the cross-country team have broken training and will not run, new men will have a chance to do some work, and should come out. An entry book is hanging in the Union at the entrance to the cage, and all entries should be in by 5 P. M. Friday, so that Coach Kanaly can make out the handicaps.

It will be interesting to note that Mr. Lorenz is to run with the fellows. He will not effect their times or places, but being holder of the record up to last year, when it was broken by H. Howland 1909, he will probably go after it again.

1911 CLASS DINNER COMMITTEE APPOINTED

Dinner Set For Friday, Dec 10 --Prominent Speakers To Be Present

President S. B. Copeland of the junior class has appointed C. F. Hobson, S. P. Kimball, and L. G. Fitzherbert to constitute the dinner committee. The dinner is to be held at the Union on Friday, December 10 at 6.30 sharp.

As has been the custom, the president of the class will act as toast-master. The speakers of the evening will be several prominent members of the faculty. Of especial interest to all however, will be the announcement of the result of the Junior Prom. committee.

The nominations will be due between Monday, Nov. 29th and Thursday, Dec. 22d. Ballots will probably be mailed to the members of the class on Monday, Dec. 6, and the polls close Thursday, Dec. 9th at 4 P. M. All those who wish to hav their vote count, must have all dues, including those for 1909-10 paid at that time. The treasurer E. A. Nash may be found in the Union every day between one and two. The following collectors have been appointed for the different courses:

Course I.—C. W. True.
Course II.—K. Barr.
Course IV.—G. S. Watson.
Course VI.—K Greenleaf
Courseese VIII-XIV.—I. W. Wilson.
Course X.—C. F. Hobson.

Dues may be inclosed with the ballot in the coming election.

Mr. and Mrs. Arba F. Harrington of Newton, Mass., have announced the engagement of their daughter, Nellie Frances to Mr. William Benjamin Jenkins, P.A. '05, M. I. T. '09. Mr. Jenkins is assistant manager of the Jenkins Steamship Co. of Cleveland, Ohio.

CALENDAR.

Wednesday, November 24.
2:00—Convocation H. H.
5:00—Aero Club meeting in Union.
Friday, November 26.
4:00—Basket Ball practice.
8:00—Joint Concert and Dance at Mechanics Building.
Saturday, November 27.
2:22—Train leaves Back Bay station for Handicap Cross-Country Run.

Convocation Today at 2 P. M.

THE TECH.

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BOSTON, NOVEMBER 24, 1909.

The Tech takes pleasure in announcing the appointment of M. A. Oettinger 1912 as associate-editor.

The idea of some of the professors at the Institute that classes losing a recitation or laboratory period because of a holiday, should make this work up by having enough lessons to prepare for the following recitation, strikes most of the undergraduate body as a mistaken one.

These holidays at the Institute are few enough and short enough to make every one appreciate them when they arrive, but how much nicer it would be to have a real holiday, with no extra work to do, than one which is a holiday in name only.

COMMUNICATION

Editor "The Tech,"

Dear Sir—One of the most pleasant features of our tame life at the Institute has always been the convocations arranged by the Institute Committee. It is through these meetings that we get the ideas of the men who address us, and an idea of things outside our own little sphere. Two or more years ago these meetings were enjoyable, not only for these insights we got into outside things, but also for the opportunity offered for the display of a little enthusiasm.

But lately the spirit of these meetings has degenerated a lot. Instead of class cheering and organized noise, we have the noise of individuals and a more or less dejected state of affairs. It is high time that those in authority got together and formulated a code of ethics to govern our convocations, since we have no venerable customs to be followed year after year. Let us have places assigned for each class, and let the classes occupy their assigned positions; let us understand clearly to whom and when the "rising greeting" shall be given; and once we have risen, let us understand when to sit down again. These are only the broadest features to be considered; the rest is up to the men in charge of the arrangements. What do you think about it?

A JUNIOR.

PLAN LONG TRIP

Course XIII Men Hold Meeting--Give 1912 Men Shingles

The naval architectural society held its third meeting of the year this afternoon in one of the department's rooms. The first business was to decide to have a trip to Fore River Works on Thursday, Dec. 2 Then came a discussion regarding the awarding of shingles to the entering men. It was decided to have the men pay $1.50 dues and receive their shingles.

The chairman told about a proposed trip to the ship yards along the coast. The cost of the trip will be about twenty-five dollars, including everything. The trip will include all of the important ship yards of New York, Philadelphia, Baltimore, Newport News and Washington. Quite a few men expressed a desire to go. The plan was left for further discussion.

HORNET'S NEST

Quincy and Cupid were indulging in a profound game of chess when I entered the Cradle. Probably not more than a dozen words had been exchanged by them during the last half hour, and Cupid was glad of a break in the monotony.

"Hello!" said he, "I thought you were following the flag with the rest. Art not a Scarecrow?"

"Probably, but how did the bird know that? I've just come back from the Shops and am not yet in touch with the current events. What's doing?"

"Easy to elucidate: the Scarecrow Club has reached Stage Two. These mushroom societies are very like the market panics described by Chauncy Banks—First the excitement, then the boom, and then the crash.

"They all develop along the same curve, and when the 212 degrees F. point is reached the thing goes off on a tangent. A handful of Dutchmen will get together over a beer and suddenly find that they "godder a verein haben,' So they do. Then some Spokaneites decide that there should be some organization to bring them into closer touch. Hence the Spokane Social Society appears. Then some more observant party gives each club a very attractive set-up in the year book. 'Everybody get aboard! How? Why we believe in physical culture and will adopt a snappy stride and perambulate the countryside. We'll have a Walker Club.' And THEY do. And when Ticatac is published their aims are accomplished and the bubbles burst.

"Now, in the present instance, some seer looked up and saw a fake dirigible hanging in front of the Food Fair, and immediately had an inspiration. There must be a Scarecrow Club. It's fashionable, and everybody would come in. Get a Big Man to give a talk and then start it up. And they did. The questions that they put to the Big Man showed how much they needed a Scarecrow Club. The thing that gets me is how on earth did such sophisticated individuals as Dick, Cad and Billiken get roped in?"

"Such shocking sedition" came from the doorway, and we suddenly looked up to see the grinning visages of the three in question.

Capt. W. D. Allan was certainly a good choice for the members of the Gym team. He is an all-round athlete and holds the record for the pole vault at the Institute. Here is good luck to Allan for a good season

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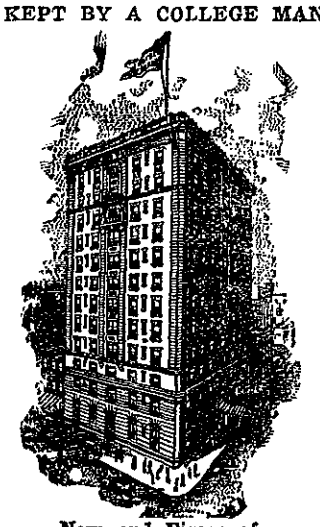

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CONVOCATION

Dr. George A. Gordon, pastor of the New Old South Church, will address the student body today at the first convocation of the year.

As in the case of all general convocations, this one will be held in Huntington Hall at 2 P. M. sharp. All two o,clock exercises will be postponed till 2.30.

Dr. Gordon's theme is not known, but in as much as today is the day before Thanksgiving, he will probably speak upon some subject relating to that day.

Dr. Maclaurin desires a full attendance, and in as much as it is the first convocation under his administration, it is expected that the entire student body will turn out.

DEFICIT VERY SMALL

"Concerning the Massachusetts Institute of Technology" has proved so decidedly desirable and valuable that the deficit, which at one time was feared would grow large, has been greatly reduced.

Five thousand copies of this work were originally issued. This edition is expected to last for three years. Up to the present day over fifteen hundred have been distributed. At the beginning of the present college year everyone in the Institute was supposed to receive a copy free of charge. Through some mistake, a few of the men of the entering class did not receive one. As soon as this was learned by the committee in charge it was decided to again give every man in the Institute a chance to obtain a copy. So these books were distributed in the various rooms during classes, and now it is believed that nearly everyone has one.

The price of the book was one dollar to all the alumni, and from now on it will be fifty cents to all undergraduates. Many copies have been sold to graduates, and from this money the deficit has been reduced to ten dollars.

The committee, of which Gorton James is chairman, has decided in a short time to turn all the copies over to the Institute, to do with as they think best. However, they wish to announce that if any one knows of any school to which it might prove profitable to send one or more copies, the committee will be only too glad to get word of it.

GLIDER TO BE BUILT

Aero Club Hold Meeting Today To Decide Important Matters

The Aero Club has been busily engaged preparing plans for a new glider. The actual work will begin on Monday. The engineering committee has decided that all material, plans and money should be handed in on this day. On the first favorable day the club will start a series of experiments with Mr. E. H. Fales' glider. This should create more interest both among the members of the club and those outside.

A committee was appointed for the purpose of locating a suitable shed in which an aeroplane may be built. The building of this heavier than air machine is the most mportant work of the club. It will be designed and built by the members.

Today there will be a meeting of the club, and it is important that all members should be present, as Mr. A. A. Merrill will give an address.

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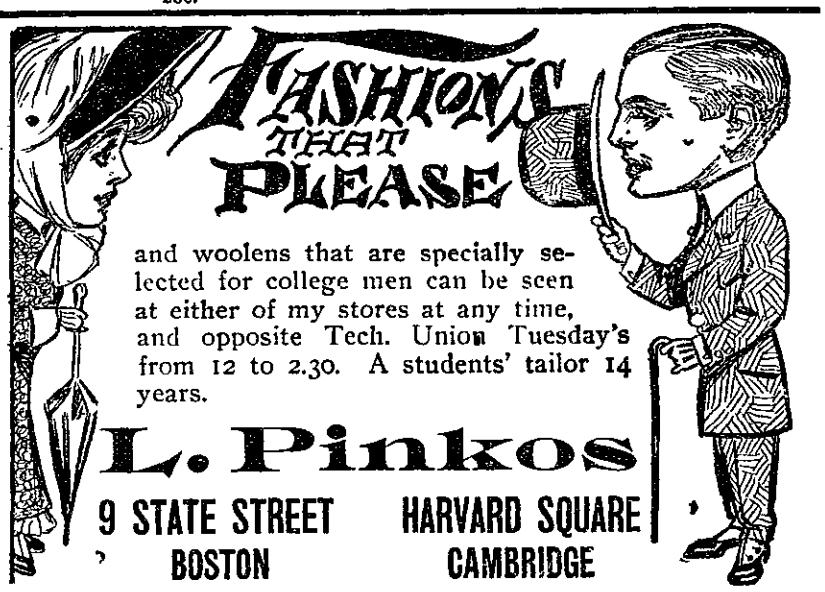

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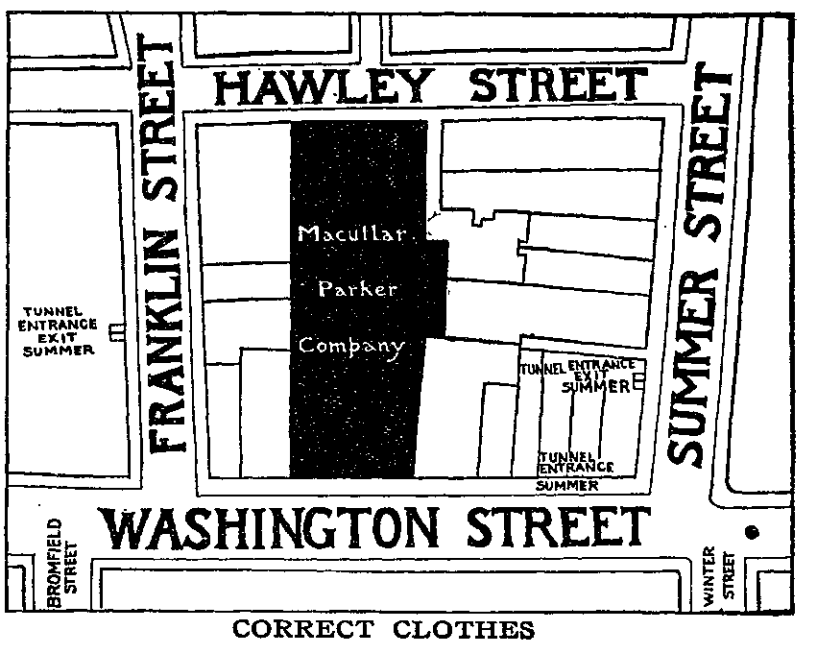

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GENERAL NOTICES.

General convocation will be held in Huntington Hall on Wednesday, November 24, at 2 P. M. sharp.

Dr. George A. Gordon will speak. All two o'clock exercises will be postponed till 2.50.

The President asks a full attendance.

Elements of Electrical Engineering (683). Problem up to number 214. Chap. XII are returned in the box in E. E. Library. Harrison W. Smith.

Dynamic Electric Machinery (661) Problems due Nov. 20 are returned.
Harrison W. Smith.

Tuesday, Nov. 23, is to be used for completing study in the field on Tuesday, Nov. 30, the class will meet in Room 10 Eng. B to receive instructions on the writing of reports.

Any students with records of D in 2d year Struct. & Field Geol. are hereby reminded to remove their deficiencies before Dec. 1. G. F. Loughlin.

100 MEN WANTED.

If you have any spare time between 10 A. M. and 10 P. M. see J. K. Mason at the Christian Ass'n office, Engineering B, between one and two o'clock. The Boston-1915 Exposition wants men who can serve as guides through the Exposition.

BASKET BALL.

No practice today on account of Thanksgiving. All out Friday.

There will be a dinner next Monday evening at 6.30 in the Union for all men connected with The Tech. A good timee. Every one come.

UNION CLOSED.

The dining room, Union rooms and Cage will be closed during the day—Thursday, Nov. 25. 48-49

LOST.

A small black Moore's non-leakable fountain pen. Reward. See circulation manager The Tech.

AERO CLUB.

Associate and full members please pay initiation fees at Cage as soon as possible. S. W. SELFRIDGE.
48-50

1911.

1911 Dues may be paid to me at the Union between 1 and 2 every day.
E. A. NASH, Treas.

CHEMICAL MEETING

(Continued from page 1.)

leathers; these are called collodian cottons.

Higher percentages of nitrogen are contained in gun cottons and other explosives. Acetates do not burn as rapidly as the nitrates.

For this reason films and other products which are liable to burn easily are now being made in place of the older style of nitrate films.

Cellulose acetate is also used in insulating very fine wires, some not thicker than .003 of an inch.

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